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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,713	10/19/2001	Reinhold Goebelmaier	Q64444	6063

7590 04/14/2003

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EXAMINER

MAYO III, WILLIAM H

ART UNIT	PAPER NUMBER
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2831

DATE MAILED: 04/14/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/981,713

Applicant(s)

GOEBLMAIER ET AL.

Examiner

William H. Mayo III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 and 15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 20 February 2003 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. This application contains claims 9-14 are drawn to an invention nonelected with traverse in Paper No. 5. A complete reply to the non final rejection must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

Drawings

2. The proposed drawing correction filed on February 20, 2003 has been disapproved because it is not in the form of a pen-and-ink sketch showing changes in red ink or with the changes otherwise highlighted. See MPEP § 608.02(v).

3. The drawings are objected to because Figures 2 & 4 lack the proper cross-hatching, which indicates the type of materials, which may be in an invention. Specifically, the cross hatching to indicate the conductor and insulation materials are incorrect. The applicant should refer to MPEP Section 608.02 for the proper cross-hatching of materials. Correction is required.

4. Applicant is required to submit a proposed drawing correction in reply to this Office action. However, formal correction of the noted defect may be deferred until after the examiner has considered the proposed drawing correction. Failure to timely submit the proposed drawing correction will result in the abandonment of the application.

Specification

Content of Specification

- (a) Title of the Invention: See 37 CFR 1.72(a) and MPEP § 606. The title of the invention should be placed at the top of the first page of the specification unless the title is provided in an application data sheet. The title of the invention should be brief but technically accurate and descriptive, preferably from two to seven words may not contain more than 500 characters.
- (b) Cross-References to Related Applications: See 37 CFR 1.78 and MPEP § 201.11.
- (c) Statement Regarding Federally Sponsored Research and Development: See MPEP § 310.
- (d) Incorporation-By-Reference Of Material Submitted On a Compact Disc: The specification is required to include an incorporation-by-reference of electronic documents that are to become part of the permanent United States Patent and Trademark Office records in the file of a patent application. See 37 CFR 1.52(e) and MPEP § 608.05. Computer program listings (37 CFR 1.96(c)), "Sequence Listings" (37 CFR 1.821(c)), and tables having more than 50 pages of text were permitted as electronic documents on compact discs beginning on September 8, 2000.

Or alternatively, Reference to a "Microfiche Appendix": See MPEP § 608.05(a). "Microfiche Appendices" were accepted by the Office until March 1, 2001.
- (e) Background of the Invention: See MPEP § 608.01(c). The specification should set forth the Background of the Invention in two parts:
 - (1) Field of the Invention: A statement of the field of art to which the invention pertains. This statement may include a paraphrasing of the applicable U.S. patent classification definitions of the subject matter of the claimed invention. This item may also be titled "Technical Field."
 - (2) Description of the Related Art including information disclosed under 37 CFR 1.97 and 37 CFR 1.98: A description of the related art known to the applicant and including, if applicable, references to specific related art and problems involved in the prior art which are

solved by the applicant's invention. This item may also be titled "Background Art."

- (f) Brief Summary of the Invention: See MPEP § 608.01(d). A brief summary or general statement of the invention as set forth in 37 CFR 1.73. The summary is separate and distinct from the abstract and is directed toward the invention rather than the disclosure as a whole. The summary may point out the advantages of the invention or how it solves problems previously existent in the prior art (and preferably indicated in the Background of the Invention). In chemical cases it should point out in general terms the utility of the invention. If possible, the nature and gist of the invention or the inventive concept should be set forth. Objects of the invention should be treated briefly and only to the extent that they contribute to an understanding of the invention.
- (g) Brief Description of the Several Views of the Drawing(s): See MPEP § 608.01(f). A reference to and brief description of the drawing(s) as set forth in 37 CFR 1.74.
- (h) Detailed Description of the Invention: See MPEP § 608.01(g). A description of the preferred embodiment(s) of the invention as required in 37 CFR 1.71. The description should be as short and specific as is necessary to describe the invention adequately and accurately. Where elements or groups of elements, compounds, and processes, which are conventional and generally widely known in the field of the invention described and their exact nature or type is not necessary for an understanding and use of the invention by a person skilled in the art, they should not be described in detail. However, where particularly complicated subject matter is involved or where the elements, compounds, or processes may not be commonly or widely known in the field, the specification should refer to another patent or readily available publication which adequately describes the subject matter.
- (i) Claim or Claims: See 37 CFR 1.75 and MPEP § 608.01(m). The claim or claims must commence on separate sheet (37 CFR 1.52(b)). Where a claim sets forth a plurality of elements or steps, each element or step of the claim should be separated by a line indentation. There may be plural indentations to further segregate subcombinations or related steps. See 37 CFR 1.75 and MPEP § 608.01(i)-(p).
- (j) Abstract of the Disclosure: See MPEP § 608.01(f). A brief narrative of the disclosure as a whole in a single paragraph of 150 words or less commencing on a separate sheet following the claims. In an international application which has entered the national stage (37 CFR 1.491(b)), the applicant need not submit an abstract commencing on a separate sheet if

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an abstract was published with the international application under PCT Article 21. The abstract that appears on the cover page of the pamphlet published by the International Bureau (IB) of the World Intellectual Property Organization (WIPO) is the abstract that will be used by the USPTO. See MPEP § 1893.03(e).

- (k) Sequence Listing. See 37 CFR 1.821-1.825 and MPEP §§ 2421-2431. The requirement for a sequence listing applies to all sequences disclosed in a given application, whether the sequences are claimed or not. See MPEP § 2421.02.

5. The disclosure is objected to because of the following informalities: The specification doesn't include a brief or detailed description of Figure 4, which is improper for the specification.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

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consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 1-3, 5-8 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over La Gase et al (Pat Num 3,823,255, herein referred to as La Gase) in view of Arroyo et al (Pat Num 4,284,842, herein referred to as Arroyo). La Gase discloses an insulated conductor (Figs 1-2) directed to a flame retardant and radiation resistant control (Col 1, lines 5-8). Specifically, with respect to claim 1, La Gase discloses an insulated conductor (10) with preserved functionality in case of fire (Col 1, lines 5-8), comprising a metallic conductor (11), a first layer (12-14) applied to the conductor (11) and a second plastic layer (15 & 21) sheathing the first layer (12-14), wherein the first layer is made of at least two strips (12 & 14) containing glass and mica (Cols 3-4, lines 35-57 & lines 30-35, respectively), that may be applied longitudinally (Cols 3-4, lines 57-59 and 35-38 respectively) to the conductor (11), wherein the strips (12 & 14) have a width and overlap each other (Fig 2). With respect to claim 2, La Gase discloses that the at least one thread of high tensile flame resistant material may be helically wrapped around the first layer (12-14, Col 3, lines 58-61). With respect to claim 3, La Gase discloses that the strips (12 & 14) may be made of glass filaments with mica particles (Col 3, lines 35-53) that are bonded to the glass filament strips with silicon resin (Col 3, lines 48-53). With respect to claim 5, La Gase discloses that the two strips (12 & 14) of high tensile flame resistant material are made of glass filaments (i.e. mica, Col 3, lines 35-53). With respect to claim 6, La Gase discloses that the two strips (12 & 14) have an overlap (Fig 2). With respect to claim 7, La Gase discloses that

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the strips (12 & 14) of the first layer (12-14) are made of glass and mica, wherein the mica layer faces the conductor (11, Col 3, lines 45-53, Fig 2). With respect to claim 8, La Gase discloses that the conductor (11) is at least two stranded conductors (Col 3, lines 31-33). With respect to claim 15, La Gase discloses that the at least two tapes (12 & 14) comprise three tapes (12, 13, & 14) wrapped around the conductor (11) to form three layers around the conductor (11, Fig 1).

However, La Gase doesn't necessarily disclose the strips of the first layer being selected to have an overlap by at least 50% (claim 1), nor the second layer comprising two tapes that are wound with a opposite direction of lay (claim 4), nor the first and the second longitudinal tapes of the first layer being offset by 180° (claim 6), nor the at least two tapes being only two tapes and overlapping themselves so as to obtain three layers around the conductor (claim 15).

Arroyo teaches a cable (Figs 1-5) having superior resistance to flame spread and smoke evolution (Col 1; lines 5-6). Specifically, with respect to claim 1, Arroyo teaches an cable (Figs 1-2) comprising a plurality of insulated conductors (23) comprising a metallic conductor (center of 23), a first glass and mica layer (31) applied to the insulated conductors (23), and a tape layer comprising at least two strips (51 & 52) that sheath the first layer (31), wherein the tape layer (51 & 52) may be longitudinally wrapped with an overlap of at least 50% (Col 4, lines 27-30). With respect to claim 4, Arroyo teaches that the tape layer (51 & 52) comprises at least two strips (51 & 52) that may be wrapped in opposite directions (Col 4, lines 27-30). With respect to claim 6, Arroyo teaches that the first strip (51) and the second strip (52) of the tape layer (51 &

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52) may be longitudinally wrapped with an overlap of at least 50%, in opposite directions, thereby inheritly having an offset of 180°. With respect to claim 6, Arroyo teaches that the first strip (51) and the second strip (52) of the second layer (51 & 52) may be longitudinally wrapped with an overlap of at least 50% in opposite directions, thereby inheritly forming two tapes (51 & 52) that overlapped themselves to form three layers around the conductor (11).

With respect to claims 1, 6, and 15, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the two opposite longitudinally wrapped tapes of La Gase to comprise an overlapped of at least 50%, thereby forming an offset of 180° and three layer structure around the conductor as taught by Arroyo because Arroyo teaches that such a configuration is commonly utilized in the cable art to prevent smoke emission and further flame spread during a fire of the cable (Col 5, lines 55-60) and since it has been held that a change in form cannot sustain patentability where involved is only extended application of obvious attributes from a prior art. *In re Span-Deck Inc. vs. Fab-Con Inc.* (CA 8, 1982) 215 USPQ 835.

With respect to claim 4, it would have been obvious to one having ordinary skill in the art of cables at the time the invention was made to modify the at least one strip of the second layer of La Gase to comprise the at least two strip configuration as taught by Arroyo because Arroyo teaches that such a configuration delays the conduction of heat to the core which decomposes the conductor and insulation, thereby controlling smoke emission and further flame spread during a fire of the cable (Col 5, lines 60-65).

Response to Arguments

9. Applicant's arguments filed February 20, 2003 have been fully considered but they are not persuasive. While the examiner inadvertently inserted the wrong Arroyo Patent Number in the header of the rejection in paper number 7, the correct Arroyo Patent Number has been utilized and the references to columns and numbers should be self-explanatory. However, the examiner will address the arguments as they may be applied to the correct Arroyo reference. Specifically, the applicant argues the following:

- A) La Gase is silent with respect to an overlap of at least 50%.
- B) Arroyo teaches plastic tapes that are helically wound around the inner sheath and therefore doesn't disclose longitudinally wrapping with an overlap of at least 50%.
- C) Neither La Gase nor Arroyo teach the tapes overlapping the conductor by at least 50% to form a three layer structure on the conductor.

With respect to arguments A-C, the examiner respectfully traverses. Clearly, La Gase discloses that the tape layers (12 & 14) may be longitudinally wrapped to form an overlapped seam (see Col 3, lines 57-59 and Col 4, lines 35-38). It has been conceded that La Gase doesn't necessarily disclose that the overlap is 50%, however Arroyo discloses a tape layer comprising two layers that may be longitudinally wrapped and having an overlap of 50%, wherein the 50% overlap structure delays the conduction of heat to the core which decomposes the conductor and insulation, thereby controlling smoke emission and further flame spread during a fire of the cable (Col 5, lines 60-65).

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Therefore, there exist a motivation for combining the teaching of La Gase and Arroyo, as both of the references are concerned with flame and first protection of the interior components. While Arroyo is silent as to the two layer forming a three layer structure, clearly if the tapes are longitudinally wrapped in opposite directions with an overlap of 50%, the seams of the first and second tapes will be spaced apart by 180° , and will overlap the conductor three times (a 50% overlap means the tape layer will wrap around the conductor 1 and a half times, i.e. that is 1.5 times for the first layer and 1.5 times for the second tape, i.e. $1.5 \text{ times} + 1.5 \text{ times} = 3 \text{ times}$). Therefore, if the tapes are wrapped longitudinally in opposite directions having a 50% overlap, as is disclosed by the combination of La Gase and Arroyo, the above stated terms are inheritly disclosed. In light of the above statement, the examiner respectfully submits that the rejection is proper and just.

Conclusion

10. Because the wrong Arroyo et al Patent Number was incorrectly stated in the header of the rejection in paper number 7, and the correct patent number was included in this office action, this action is non-final

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. They are Robinson et al (Pat Num 2,222,555), Shelton, Jr (Pat Num 3,425,865), Vanderzee (Pat Num 4,715,915), Tailor et al (Pat Num 4,472,468),

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and Sullivan (EP Pat Num 0 040 035), all of which disclose cables or wraps for improving flame retardant characteristics of a cable.

Communication

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William H. Mayo III whose telephone number is (703) 306-9061. The examiner can normally be reached on M-F 8:30am-6:00 pm (alternate Fridays off).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3431 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.


WHM III
April 7, 2003